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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,548	02/09/2001	David John Zanzig	DN1999061P01	1552

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The Goodyear Tire & Rubber Company
Patent & Trademark Department-D/823
1144 East Market Street
Akron, OH 44316-0001

EXAMINER

MAKI, STEVEN D

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 03/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-6

Office Action Summary	Application No.	Applicant(s)	
	09/780,548	ZANZIG ET AL	
	Examiner	Art Unit	
	Steven D. Maki	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 9-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claims 1-6 and 9-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 part (B) (1), the description of "copolymers of isoprene, 1,3 [butadiene] and their mixtures with styrene" is unclear. Which monomers are required to make the copolymer?

In claim 1, part (B), "the rubber composition" should be --a rubber composition-- to avoid a minor antecedent basis problem.

In claim 1 part (B) (1), "butadien" should be --butadiene--

In claim 1 part (B) (2) "DBD" should be --DBP--

- 3) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 4) **Claims 1-6 and 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al (WO 99/52720) in view of Sandstrom et al '266 (US Patent 6,046,266) and Thise (US 5284898) and optionally Ahmad et al (US 4703079).**

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Brown et al discloses a pneumatic tire (off road tire / truck tire) having a tread and sidewalls. The tread comprises a lug and groove configuration which extends over the sidewall to a radial location between (1) 65 % of the section height of the tire and (2) the maximum section width of the tire. At page 8 lines 16-20, Brown et al teaches that the sidewall comprises a rubber composition comprising **natural rubber, cis 1,4 polybutadiene, carbon black, silica and coupling agent**. Hence, Brown et al generally teaches the claimed composition of the sidewall. As to an example of a composition which may be used, Brown et al specifically directs attention to US application 09/159,663 now US Patent 6046266 (Sandstrom et al '266).

Sandstrom et al '266 discloses a pneumatic tire for heavy load such as a truck tire comprising a tread and sidewalls. As to the sidewall, the sidewall comprises 100 phr **diene based elastomers** including 20-60 phr *cis 1,4 polyisoprene having a Tg of -65 degrees to about -75 degrees C* and 40-80 phr *cis polybutadiene rubber having a Tg of -100 degrees C to -110 degrees C*, 40-80 phr reinforcing filler including 20-60 phr **silica** having a BET of for example 50-300 square meters per gram and 15-60 phr **carbon black** having a DBP of 65-130 cc/100g and a Iodine number of 25-85 g/kg wherein the weight ratio of silica to carbon is 1/1 to 3/1; and a **coupling agent**.

As side by side comparison of Sandstrom et al '266 and the claimed invention is presented below:

Sandstrom et al '266	Claimed Invention
<u>100 phr elastomer</u>	<u>100 parts by weight rubber</u>
20-60 cis- 1,4 polyisoprene	40-80 cis-1,4 polyisoprene

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(natural rubber) with Tg of -65 to -75 °C	natural rubber
40-80 cis 1,4 polybutadiene with Tg of -100 to -110 °C	20-60 cis 1,4 polybutadiene rubber
<u>40-80 filler</u>	<u>55-80 filler</u>
15-60 carbon black DBP= 65-130 cc/100gm Iodine Number = 25-85 g/kg	5-40 carbon black DBP= 70-130 cm ³ /100g Iodine Number 35-85 g/kg
20-60 silica BET = 50-300 m ² /g weight ratio 1/1 to 3/1	10-70 silica BET = 125-200 m ² /g weight ratio .3/1 to 3/1
coupling agent	coupling agent

As can be seen from the above comparison, Sandstrom '266 teaches each of the claimed ingredients for the sidewall and teaches amounts thereof which overlap / fall within the claimed ranges. Hence, Sandstrom et al '266 substantially discloses the claimed sidewall rubber composition.

As to the sidewall rubber composition, it would have been obvious to use the claimed composition for the sidewall since (1) Brown et al, which generally discloses the claimed composition for the sidewall of a truck tire, directs attention to Sandstrom et al '266 and (2) Sandstrom et al '266 suggest using a sidewall composition for a sidewall of a truck tire which is substantially the same as the claimed sidewall composition.

Furthermore, it would have been obvious to one of ordinary skill in the art to provide the tread and sidewall of the tire of Brown et al with a lug and groove configuration which extends

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over least 30% of the sidewall (claim 1) / extends over at least 50% of the sidewall (claim 2) / extends to at least the maximum section width of the tire (claim 3) since Brown et al teaches extending the lug and groove configuration over the sidewall to a radial location between (1) 65 % of the section height of the tire and (2) the maximum section width of the tire.

As to the tread, it would have been obvious to one of ordinary skill in the art to use the claimed tread rubber composition in view of (1) Thise's suggestion to use rubber composition comprising a *high structure carbon black* such as N121 (DBP of 132 and iodine number of 121), solution SBR, natural rubber and cis 1,4 polyisoprene for a truck tire to obtain the beneficial results of good traction, lower heat build up and good tread wear (one of ordinary skill in the art readily understanding from Thise's teachings and examples that use of silica in Thise's composition is not required) and optionally (2) Ahmad et al's teaching to avoid using silica in a truck tire tread composition containing *high structure carbon black* to avoid problems such as tread separation and decreased tread wear.

As to claims 4-6 (exclusion of elastomers having a Tg in a range of -70°C to about -100°C / exclusion of specified elastomers), note that the elastomers in Sandstrom et al '266 can be cis 1,4 polyisoprene and cis 1,4 polybutadiene - this specific combination of elastomers being specifically described by Sandstrom et al '266 at column 3 which states: "blending (1) about 20 to about 60 phr ... and (2) about 40 to about 80 phr (a) ... or (b)" (emphasis added).

As to claims 9-11 (additional elastomer), note Sandstrom et al '266's teaching at col. 6 lines 59-68 to use a minor amount of additional elastomer.

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As to claims 12-16, the claimed coupling agent would have been obvious in view of the teachings in Sandstrom et al '266 (column 7) regarding which coupling agents to use.

As to claim 17, use of the specified carbon black for the sidewall would have been obvious in view of Sandstrom et al '266's teaching to use carbon black such as N326, N550 or N660 for the sidewall composition.

As to claim 18, use of the specified carbon black for the tread would have been obvious in view of Thise's suggestion to use a carbon black such as N121 for the tire tread composition.

5) **Claims 1-6 and 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al (WO 99/52720) in view of Matsuo (US 5929157) and Thise (US 5284898) and optionally Ahmad et al (US 4703079).¹**

As to the sidewall rubber composition, it would have been obvious to use the claimed composition for the sidewall since (1) Brown et al generally discloses the claimed composition for the sidewall of a truck tire - Brown's sidewall rubber composition comprising natural rubber, cis 1,4 polybutadiene, carbon black, silica and coupling agent and (2) Matsuo, also directed to a sidewall rubber composition suggests using not less than 30 parts natural rubber, 30-70 parts polybutadiene, 5-50 parts carbon black such as FEF (N550), 10-60 parts silica having a BET of not more than 180 and coupling agent.

¹This rejection using Matsuo is made in addition to the above rejection using Sandstrom et al '266 since Sandstrom et al '266 may be excluded as *102(e) type* prior art under 35 USC 103(c) whereas Matsuo cannot.

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Furthermore, it would have been obvious to one of ordinary skill in the art to provide the tread and sidewall of the tire of Brown et al with a lug and groove configuration which extends over least 30% of the sidewall (claim 1) / extends over at least 50% of the sidewall (claim 2) / extends to at least the maximum section width of the tire (claim 3) since Brown et al teaches extending the lug and groove configuration over the sidewall to a radial location between (1) 65 % of the section height of the tire and (2) the maximum section width of the tire.

As to the tread, it would have been obvious to one of ordinary skill in the art to use the claimed tread rubber composition in view of (1) Thise's suggestion to use rubber composition comprising a *high structure carbon black* such as N121 (DBP of 132 and iodine number of 121), solution SBR, natural rubber and cis 1,4 polyisoprene for a truck tire to obtain the beneficial results of good traction, lower heat build up and good tread wear (one of ordinary skill in the art readily understanding from Thise's teachings and examples that use of silica in Thise's composition is not required) and optionally (2) Ahmad et al's teaching to avoid using silica in a truck tire tread composition containing *high structure carbon black* to avoid problems such as tread separation and decreased tread wear.

As to claims 4-6, the limitations therein regarding exclusion of elastomers (exclusion of elastomers having a Tg in a range of -70°C to about -100°C / exclusion of specified elastomers) would have been obvious in view of Brown et al's teaching to use natural rubber and cis 1,4 polybutadiene in the sidewall rubber composition (natural rubber having a Tg between -65 to -75

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degrees C being taken as well known per se and cis 1, 4 polybutadiene having a Tg over 100 degrees C being taken as well known per se).

As to claims 9-11, the limitations therein (additional elastomer) would have been obvious since Matsuo teaches that emulsion SBR may also be used in a sidewall rubber composition.

As to claims 12-16, the claimed coupling agent would have been obvious in view of
(a) the teachings in Matsuo (column 3) regarding which coupling agents to use and optionally
(b) each of the described coupling agent per se is taken as a well known silica coupler for silica in a rubber composition for a tire component.

As to claim 17, use of the specified carbon black for the sidewall would have been obvious in view of Matsuo's teaching to use carbon black such as FEF (N550) for a sidewall composition.

As to claim 18, use of the specified carbon black for the tread would have been obvious in view of Thise's suggestion to use a carbon black such as N121 for the tire tread composition.

6) Remarks

Applicant's arguments with respect to claims 1-6 and 9-18 have been considered but are moot in view of the new ground(s) of rejection. This action is non-final since the new ground of rejection was not necessitated by amendment.

Australia 37769 is cited of interest for showing a lug and groove configuration extending over the sidewall of the tire.

US Patent 6,046,266 is available as prior art under 35 USC 102(e). It is acknowledged that since this application was filed 2-9-01, this application is eligible for the prior

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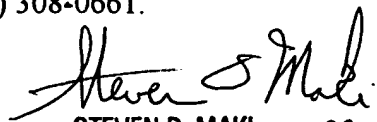
art exclusion under 35 USC 103(c) - this exclusion applying to those applications filed on or after 11/29/99. However: US Patent 6,046,266 is not disqualified as a reference under 35 USC 103(c) because this application fails to contain the required evidence such as a **statement** that the application and the reference were, **at the time the invention was made**, owned by, or subject to an obligation of assignment to, the same person.

US 6046266 is also available as prior art under 35 USC 102(a) and WO 99/52720 is available as prior art under 35 USC 102(b) since (1) each of US 6046266 (which has a different inventive entity than this application) and WO 99/52720 were published before the filing date of this CIP application and (2) this application is not entitled to the benefit of the filing date of the parent application 09/260,815. See MPEP 201.08 (page 200-70, Aug 2001, WHEN NOT ENTITLED TO BENEFIT OF FILING DATE). US 6046266 cannot be excluded as *102(a) type* prior art under 35 USC 103(c) since 35 USC 103(c) relates to 102(e) type prior art and not 102(a) type prior art.

7) No claim is allowed.

8) Any inquiry concerning this communication or earlier communications from the examiner should ~~be~~ directed to Steven D. Maki whose telephone number is (703) 308-2068. The examiner can normally be reached on Monday to Friday from 7:00 AM to 3:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball, can be reached on (703) 308-2058. The fax phone number for Art Unit 1733 is (703) 872-9310. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Steven D. Maki
February 23, 2003


STEVEN D. MAKI 2-23-03
PRIMARY EXAMINER
-GROUP 1300-
AU 1733